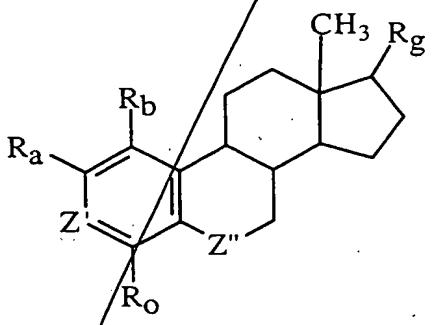
CLAIMS

We claim:

1. A compound of the general formula:



wherein:

a) R_b and R_o are independently -H, -Cl, -Br, -I, -F, -CN, lower alkyl, -OH, $-CH_2-OH$, $-NH_2$; or $N(R_6)(R_7)$, wherein R_6 and R_7 are independently hydrogen or an alkyl or branched alkyl with up to 6 carbons;

b) R_a is $-N_3$, $-C\equiv N$, $-N_3$, $-C\equiv C-R$, $-C=CH-R$, $-R-C=CH_2$, $-C\equiv CH$, -O-R, -R-R_1, or -O-R-R_1 where R is a straight or branched alkyl with up to 10 carbons or aralkyl, and R_1 is -OH, $-NH_2$, -Cl, -Br, -I, -F or CF_3;

c) Z' is >CH, >COH, or >C-R_2-OH, where R_2 is an alkyl or branched alkyl with up to 10 carbons or aralkyl;

d) >C-R_g is $>CH_2$, >C(H)-OH, >C=O, >C=N-OH, $>C(R_3)OH$, >C=N-OR_3, $>C(H)-NH_2$, $>C(H)-NHR_3$, $>C(H)-NR_3R_4$, or $>C(H)-C(O)-R_3$, where each R_3 and R_4 is independently an alkyl or branched alkyl with up to 10 carbons or aralkyl; and

e) Z" is $>CH_2$, >C=O, >C(H)-OH, >C=N-OH, >C=N-OR_5, $>C(H)-C\equiv N$, or $>C(H)-NR_5R_5$, wherein each R_5 is independently hydrogen, an alkyl or branched alkyl with up to 10 carbons or aralkyl.

2. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is $-C\equiv C-CH_3$
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is $>CH_2$.

3. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is OCH_2CF_3
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=O.

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4. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is OCH_2CF_3
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=NOH.

5. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is $>CH_2$.

6. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is OCH_2CF_3
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is $>CH_2$.

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7. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is $CH=CH_2$
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is $>CH_2$.

8. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is *E*-$CH=CHCH_3$
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is $>CH_2$.

9. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is NHC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is $>CH_2$.

10. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is $NHCOCH_3$
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is $>CH_2$.

11. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=O.

12. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >OH.

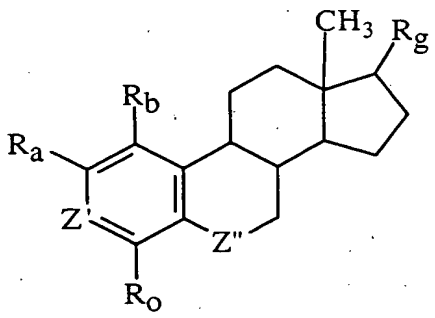
13. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=NOH.

14. The compound of Claim 1, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=NOCH3.

15. A method of inhibiting angiogenesis comprising adminsteriung to an endothelial cell an angiogenesis inhibiting amount of a compound of the general formula:



wherein:

a) R_b and R_o are independently -H, -Cl, -Br, -I, -F, -CN, lower alkyl, -OH, $-CH_2-OH$, $-NH_2$; or $N(R_6)(R_7)$, wherein R_6 and R_7 are independently hydrogen or an alkyl or branched alkyl with up to 6 carbons;

b) R_a is $-N_3$, $-C\equiv N$, $-N_3$, $-C\equiv C-R$, -C=CH-R, $-R-C=CH_2$, $-C\equiv CH$, -O-R, $-R-R_1$, or $-O-R-R_1$ where R is a straight or branched alkyl with up to 10 carbons or aralkyl, and R_1 is -OH, $-NH_2$, -Cl, -Br, -I, -F or CF_3;

c) Z' is >CH, >COH, or $>C-R_2-OH$, where R_2 is an alkyl or branched alkyl with up to 10 carbons or aralkyl;

d) $>C-R_g$ is $>CH_2$, >C(H)-OH, >C=O, >C=N-OH, $>C(R_3)OH$, $>C=N-OR_3$, $>C(H)-NH_2$, $>C(H)-NHR_3$, $>C(H)-NR_3R_4$, or $>C(H)-C(O)-R_3$, where each R_3 and R_4 is independently an alkyl or branched alkyl with up to 10 carbons or aralkyl; and

e) Z" is $>CH_2$, >C=O, >C(H)-OH, >C=N-OH, $>C=N-OR_5$, $>C(H)-C\equiv N$, or $>C(H)-NR_5R_5$, wherein each R_5 is independently hydrogen, an alkyl or branched alkyl with up to 10 carbons or aralkyl.

16. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is $-C\equiv C-CH_3$
Z' is >C-OH,
$>C-R_g$ is >C(H)-ß-OH, and
Z" is $>CH_2$.

17. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is OCH_2CF_3
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=O.

18. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is OCH_2CF_3
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=NOH.

19. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >CH_2.

20. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is OCH_2CF_3
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >CH_2.

21. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is $CH=CH_2$
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >CH_2.

22. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is *E*-$CH=CHCH_3$
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >CH_2.

23. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is NHC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >CH_2.

24. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is $NHCOCH_3$
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >CH_2.

25. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=O.

26. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >OH.

27. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >C=NOH.

28. The method of Claim 15, wherein :

R_b and R_o are H,
R_a is OC_2H_5
Z' is >C-OH,
>C-R_g is >C(H)-ß-OH, and
Z" is >$C=NOCH_3$.

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